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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/777,299

02/12/2004

Paul E. Share

13015/39281

5310

62127 7590 07/18/2008

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EXAMINER

DANIELS, MATTHEW J

ART UNIT

PAPER NUMBER

1791

MAIL DATE

DELIVERY MODE

07/18/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/777,299	Applicant(s) SHARE ET AL.	
	Examiner MATTHEW J. DANIELS	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-3,5-21 and 25-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-21 and 25-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 13 May 2008 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Rejections over Speer

2. **Claims 1-4, 6-15, 17-21, 25-33** are rejected under 35 U.S.C. 103(a) as obvious over Speer (US 5,211,875) in view of Collette (US 5,759,653).

As to Claim 1, Speer teaches a process in which a diluent polyester (6:8-18), a polyamide material (3:53-56), and an oxygen scavenging material (4:64-5:12) are preblended (10:40-65), and the material is subsequently injection molded or blow molded (6:45-50). The plastic container formed by the Speer process would be stable during unfilled storage since it is activated by radiation (9:8), and the barrier layer would have an oxygen scavenging property that

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is activated after filling the container with a product in view of the fact that Speer teaches that activation can be performed after packaging (9:7-11).

Speer is silent to the mixing the preblend into a molding apparatus with a base polyester, injection molding a preform, and then expanding the preform to provide a plastic container having a barrier layer formed from an admixture.

However, Collette teach a method comprising the steps of: (a) forming a preblend/masterbatch (col 5 lines 6-7) comprising: a diluent polyester (col 5 line 17), a polyamide material (col 5 line 18), and an oxygen scavenging material (col 5 line 19); providing a base/core layer polyester (col 5 line 31); introducing the preblend and the base polyester into a molding apparatus to permit melting and admixing of the preblend and the base polyester (col 5 lines 29-65); injection molding or extruding the admixture in the apparatus to provide a preform (fig 3, **59**); and expanding the preform to provide a plastic container having a barrier layer formed from the admixture of the preblend and polyester (fig 6 & 7). Collette also teaches forming bottles with catalysts that are activated by heat or radiation (7:32) and hot fill applications (7:61), and wherein a change in oxygen barrier condition across the wall can be induced by water from the product which is transmitted through the wall (8:47-49).

It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Collette into that of Speer because (a) Speer suggests a masterbatch process and diluent polyester (6:8-45), which Collette provides, and (b) the masterbatch process of Collette is a known technique that one that the ordinary artisan would have found applicable to the Speer process since both patents teach substantially the same constituents and end use (packaging), and one would have found it obvious to apply the

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masterbatch process of Collette to the Speer process in order to provide improved dispersion of the scavenging material in the polyester packaging material.

As to Claim 2, Collette teach that the plastic container is a multilayer plastic container (fig 7).

As to Claim 3, Collette suggest that monolayer plastic containers are known and conventional in the prior art (col 1 lines 47-51).

As to Claim 5, Collette teaches the same preblending process, and (see the rejection of Claim 1 above), and thus the preblend would implicitly exhibit the claimed characteristics despite that Collette is silent to comparing the preblend with the claimed hypothetical mixture.

As to Claim 6, Collette et al teach that the preblend is in a form of solid particles (col 5 line 26).

As to Claim 7, Collette et al teach that the diluent polyester is present in the preblend in an amount of about 25% to about 75%, by weight of the preblend (col 16 line 3-7).

As to Claim 8, Collette et al teach that the diluent polyester comprises polyethylene terephthalate and polyethylene naphthalate (col 14 line 22-27).

As to Claim 9, Collette teaches that the base polyester contains a substantial portion virgin PET, which would implicitly be bottle grade (16:12-14). It is noted that Claim 19 of Collette is drawn to “on the order of 50% post consumer PET” (15:15-20). However, the Examiner’s position will be that the additional post consumer PET does not materially affect the basic and novel characteristics of the claimed invention because it provides PET material which would have the same or substantially the same structure as the virgin material.

As to Claim 10, Collette et al teach that the polyamide material is present in the preblend in an amount of about 25% to about 75%, by weight of the preblend (col 15 line 7-11).

As to Claim 11, Collette et al teach that the polyamide material comprises a polymer containing m-xylylenediamine monomer units (col 10 line 51).

As to Claim 12, Collette et al teach that the polyamide material comprises a polymerization product of m-xylylenediamine and adipic acid (col 10 lines 51-52).

As to Claims 13-15, Collette et al teach an oxygen scavenging material present in the preblend in an amount of about 50 to about 1000 parts per million, by weight and comprises cobalt or a metal complex thereof (col 10 lines 24-37).

As to Claim 17, Collette et al teach that the base polyester is in a form of solid particles (col 5 lines 59-67).

As to Claim 18, Collette et al teach that the preblend and the base polyester are admixed in an amount of about 0.5% to about 20%, by weight, of the preblend, and about 80% to about 99.5%, by weight, of the base polyester (col 16 lines 8-11).

As to Claim 19, Collette et al teach that the base polyester is polyethylene terephthalate (col 5 line 31).

As to Claim 20, Collette et al teach that the polyethylene terephthalate comprises a virgin bottle grade polyethylene terephthalate, a post consumer grade polyethylene terephthalate, or a mixture thereof (col 5 lines 11-32).

As to Claim 21, Collette et al teach that the preform contains about 10 to about 80 ppm, by weight, of the oxygen scavenging material (col 1 line 53).

As to Claim 25, Collette teaches that the containers are maintained in refrigeration or desiccation (7:25-28), and hot filling (7:61) or filling with water (8:46-51), which would inherently activate the oxygen scavenging property for those catalysts which activate at room temperature (7:29-30). Alternatively, this aspect of the invention is drawn to a rearrangement of process steps disclosed in the prior art, which is generally deemed to be prima facie obvious. In view of Collette's teaching that the scavengers are activated by heat and moisture (), it would have been obvious to activate the scavengers with a hot product (7:61) containing moisture ()

As to Claim 26, Collette's teaching of the claimed process steps and ingredients, when used to form a package, would implicitly meet the claimed result.

As to Claim 27, Speer teaches a process in which a diluent polyester (6:8-18), a polyamide material (3:53-56), and an oxygen scavenging material (4:64-5:12) are preblended (10:40-65), and the material is subsequently injection molded or blow molded (6:45-50). The plastic container formed by the Speer process would be stable during unfilled storage since it is activated by radiation (9:8), and the barrier layer would have an oxygen scavenging property that is activated after filling the container with a product in view of the fact that Speer teaches that activation can be performed after packaging (9:7-11). When the package is filled with the product and the activation is performed after filling, the permeability would be less after 48 hours than prior to filling the package with product.

Speer is silent to the mixing the preblend into a molding apparatus with a virgin bottle grade base polyester, injection molding a preform, and then expanding the preform to provide a plastic container having a barrier layer formed from an admixture.

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Collette teach a method comprising the steps of: (a) forming a preblend/masterbatch (col 5 lines 6-7) comprising: a diluent polyester (col 5 line 17), a polyamide material (col 5 line 18), and an oxygen scavenging material (col 5 line 19); providing a virgin grade polyester (col 16, lines 12-14); introducing the preblend and the polyester into a molding apparatus to permit melting and admixing of the preblend and the base polyester (col 5 lines 29-65); injection molding or extruding the admixture in the apparatus to provide a preform (fig 3, **59**); and expanding the preform to provide a plastic container having a barrier layer formed from the admixture of the preblend and polyester (fig 6 & 7), wherein the plastic container and barrier layer has oxygen scavenging property that is activated after filling the container with an aqueous fluid (7:24-33, 7:59-63, 8:46-51). Collette also teaches forming bottles with catalysts that are activated by heat (7:32) and hot fill applications (7:61), which would therefore activate the catalyst during filling.

Collette does not explicitly teach that the admixture consists essentially of the preblend and virgin bottle grade polyester. However, this aspect of the invention would have been prima facie obvious because (a) the admixture of Collette contains virgin PET (See Claim 28), and it would have been obvious to use the same material in other stages of the process, (b) Collette treats the post-consumer material by drying such that it would be substantially the same as virgin PET (5:59-65), (c) it is submitted that it would have been obvious to the ordinary artisan to substitute virgin PET for post-consumer PET in order to reduce contaminants and improve cleanliness, or (d) because PET and PC-PET would be obviously interchangeable or substitutable for each other in the fabrication of bottles.

It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Collette into that of Speer because (a) Speer suggests a masterbatch process and diluent polyester (6:8-45), which Collette provides, and (b) the masterbatch process of Collette is a known technique that one that the ordinary artisan would have found applicable to the Speer process since both patents teach substantially the same constituents and end use (packaging), and one would have found it obvious to apply the masterbatch process of Collette to the Speer process in order to provide improved dispersion of the scavenging material in the polyester packaging material.

As to Claim 28, Collette et al teach a transition metal oxygen scavenging material present in the preblend in an amount of about 50 to about 1000 parts per million (col. 10, lines 23-37), the polyamide material is present in the preblend in an amount of about 10-50% by weight of the preblend (col 15 line 7-11), and the polyester comprising PET used in a percentage of about 50-90% (col 15, lines 3-4).

As to Claim 29, Collette et al teach a transition metal oxygen scavenging material present in the preblend in an amount of about 50 to about 1000 parts per million (col. 10, lines 23-37), the polyamide material is present in the preblend in an amount of about 10-50% by weight of the preblend (col 15 line 7-11), and the polyester comprising PET used in a percentage of about 50-90% (col 15, lines 3-4).

As to Claim 30, Collette teaches the base polyester contains virgin polyethylene terephthalate (col 16, lines 12-14).

As to Claim 31, Speer teaches a process in which a diluent polyester (6:8-18), a polyamide material (3:53-56), and an oxygen scavenging material (4:64-5:12) are preblended

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(10:40-65), and the material is subsequently injection molded or blow molded (6:45-50) and suggests that the articles be provided as monolayers (single layers of material, 3:28-30). The plastic container formed by the Speer process would be stable during unfilled storage since and can be activated at any stage, particularly during packaging (9:5-15).

Speer is silent to the mixing the preblend into a molding apparatus with a base polyester, injection molding a preform, and then expanding the preform to provide a plastic container having a barrier layer formed from an admixture.

Collette teach a method comprising the steps of: (a) forming a preblend/masterbatch (col 5 lines 6-7) comprising: a diluent polyester (col 5 line 17), a polyamide material (col 5 line 18), and an oxygen scavenging material (col 5 line 19); providing a base grade polyester (col 15, lines 12-20, col 16, lines 12-14); introducing the preblend and the polyester into a molding apparatus to permit melting and admixing of the preblend and the base polyester (col 5 lines 29-65); injection molding or extruding the admixture in the apparatus to provide a preform (fig 3, **59**); and expanding the preform to provide a plastic container having a barrier layer formed from the admixture of the preblend and polyester (fig 6 & 7), wherein the plastic container and barrier layer has oxygen scavenging property that is activated after filling the container with an aqueous fluid (7:24-33, 7:59-63, 8:46-51). Collette also teaches forming bottles with catalysts that are activated by heat (7:32) and hot fill applications (7:61), which would therefore activate the catalyst during filling. Collette acknowledges that fabrication of monolayer articles is generally known in the prior art (col 1, lines 46-60), and it would have been prima facie obvious to provide a monlayer preform.

It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Collette into that of Speer because (a) Speer suggests a masterbatch process and diluent polyester (6:8-45), which Collette provides, and (b) the masterbatch process of Collette is a known technique that one that the ordinary artisan would have found applicable to the Speer process since both patents teach substantially the same constituents and end use (packaging), and one would have found it obvious to apply the masterbatch process of Collette to the Speer process in order to provide improved dispersion of the scavenging material in the polyester packaging material.

As to Claim 32, Collette et al teach a transition metal oxygen scavenging material present in the preblend in an amount of about 50 to about 1000 parts per million (col. 10, lines 23-37), the polyamide material is present in the preblend in an amount of about 10-50% by weight of the preblend (col 15 line 7-11), and the polyester comprising PET used in a percentage of about 50-90% (col 15, lines 3-4).

As to Claim 33, Speer teaches that the amount of transition metal catalyst may range from 10 ppm to 10,000 ppm of the scavenging component, which suggests a wide range encompassing the claimed amount.

Rejections over Collette or Nilsson in view of Collette

3. **Claims 1-4, 6-15, 17-21, 25-30** are rejected under 35 U.S.C. 103(a) as obvious over Collette (5759653).

As to Claim 1, Collette teach a method comprising the steps of: (a) forming a preblend/masterbatch (col 5 lines 6-7) comprising: a diluent polyester (col 5 line 17), a

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polyamide material (col 5 line 18), and an oxygen scavenging material (col 5 line 19); providing a base/core layer polyester (col 5 line 31); introducing the preblend and the base polyester into a molding apparatus to permit melting and admixing of the preblend and the base polyester (col 5 lines 29-65); injection molding or extruding the admixture in the apparatus to provide a preform (fig 3, **59**); and expanding the preform to provide a plastic container having a barrier layer formed from the admixture of the preblend and polyester (fig 6 & 7), wherein the plastic container and barrier layer has oxygen scavenging property that is activated after filling the container with an aqueous fluid (7:24-33, 7:59-63, 8:46-51). Collette also teaches forming bottles with catalysts that are activated by heat (7:32) and hot fill applications (7:61), which would therefore activate the catalyst during filling. If it is ultimately determined that Collette activates before filling, this limitation is drawn merely to a rearrangement of process steps disclosed by the prior art, and in view of Collette's teaching of methods in which the catalysts are activated, one would have found it obvious to rearrange the order of filling and activation.

Collette do not explicitly teach that the container is "stable during unfilled storage". However, in this regard, Collette suggests that catalysts are activated by oxygen (7:30), heat (7:32), or moisture (7:2-6), and that the stability (shelf life) of the bottles may be improved by refrigeration, desiccation, or storing in a modified atmosphere environment (7:24-28). Thus, although Collette is silent to the stability, Collette teaches storage conditions which would improve the stability of the bottle.

As to Claim 2, Collette teach that the plastic container is a multilayer plastic container (fig 7).

As to Claim 3, Collette suggest that monolayer plastic containers are known and conventional in the prior art (col 1 lines 47-51).

As to Claim 5, Collette teaches the same preblending process, and (see the rejection of Claim 1 above), and thus the preblend would implicitly exhibit the claimed characteristics despite that Collette is silent to comparing the preblend with the claimed hypothetical mixture.

As to Claim 6, Collette et al teach that the preblend is in a form of solid particles (col 5 line 26).

As to Claim 7, Collette et al teach that the diluent polyester is present in the preblend in an amount of about 25% to about 75%, by weight of the preblend (col 16 line 3-7).

As to Claim 8, Collette et al teach that the diluent polyester comprises polyethylene terephthalate and polyethylene naphthalate (col 14 line 22-27).

As to Claim 9, Collette teaches that the base polyester contains a substantial portion virgin PET, which would implicitly be bottle grade (16:12-14). It is noted that Claim 19 of Collette is drawn to “on the order of 50% post consumer PET” (15:15-20). However, the Examiner’s position will be that the additional post consumer PET does not materially affect the basic and novel characteristics of the claimed invention because it provides PET material which would have the same or substantially the same structure as the virgin material.

As to Claim 10, Collette et al teach that the polyamide material is present in the preblend in an amount of about 25% to about 75%, by weight of the preblend (col 15 line 7-11).

As to Claim 11, Collette et al teach that the polyamide material comprises a polymer containing m-xylylenediamine monomer units (col 10 line 51).

As to Claim 12, Collette et al teach that the polyamide material comprises a polymerization product of m-xylylenediamine and adipic acid (col 10 lines 51-52).

As to Claims 13-15, Collette et al teach an oxygen scavenging material present in the preblend in an amount of about 50 to about 1000 parts per million, by weight and comprises cobalt or a metal complex thereof (col 10 lines 24-37).

As to Claim 17, Collette et al teach that the base polyester is in a form of solid particles (col 5 lines 59-67).

As to Claim 18, Collette et al teach that the preblend and the base polyester are admixed in an amount of about 0.5% to about 20%, by weight, of the preblend, and about 80% to about 99.5%, by weight, of the base polyester (col 16 lines 8-11).

As to Claim 19, Collette et al teach that the base polyester is polyethylene terephthalate (col 5 line 31).

As to Claim 20, Collette et al teach that the polyethylene terephthalate comprises a virgin bottle grade polyethylene terephthalate, a post consumer grade polyethylene terephthalate, or a mixture thereof (col 5 lines 11-32).

As to Claim 21, Collette et al teach that the preform contains about 10 to about 80 ppm, by weight, of the oxygen scavenging material (col 1 line 53).

As to Claim 25, Collette teaches that the containers are maintained in refrigeration or desiccation (7:25-28), and hot filling (7:61) or filling with water (8:46-51), which would inherently activate the oxygen scavenging property for those catalysts which activate at room temperature (7:29-30). Alternatively, this aspect of the invention is drawn to a rearrangement of process steps disclosed in the prior art, which is generally deemed to be prima facie obvious. In

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view of Collette's teaching that the scavengers are activated by heat and moisture (), it would have been obvious to activate the scavengers with a hot product (7:61) containing moisture ()

As to Claim 26, Collette's teaching of the claimed process steps and ingredients, when used to form a package, would implicitly meet the claimed result.

As to Claim 27, Collette teach a method comprising the steps of: (a) forming a preblend/masterbatch (col 5 lines 6-7) comprising: a diluent polyester (col 5 line 17), a polyamide material (col 5 line 18), and an oxygen scavenging material (col 5 line 19); providing a virgin grade polyester (col 16, lines 12-14); introducing the preblend and the polyester into a molding apparatus to permit melting and admixing of the preblend and the base polyester (col 5 lines 29-65); injection molding or extruding the admixture in the apparatus to provide a preform (fig 3, **59**); and expanding the preform to provide a plastic container having a barrier layer formed from the admixture of the preblend and polyester (fig 6 & 7), wherein the plastic container and barrier layer has oxygen scavenging property that is activated after filling the container with an aqueous fluid (7:24-33, 7:59-63, 8:46-51). Collette also teaches forming bottles with catalysts that are activated by heat (7:32) and hot fill applications (7:61), which would therefore activate the catalyst during filling.

Collette does not explicitly teach (a) the admixture consists essentially of the preblend and virgin bottle grade polyester, or (b) the permeability change achieved by the filling with water. However, these aspects of the invention would have been prima facie obvious for the following reasons:

(a) The admixture of Collette contains virgin PET (See Claim 28), but also contains post consumer PET. However, because the material is the same or substantially the same as the

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remainder of the preblend material, it would not materially affect the basic and novel characteristics of the invention, and thus this transitional language would still read on the method of Collette.

(b) The claimed process steps and ingredients of Collette, when used to form a package according to Collette's teachings, would implicitly meet the claimed result.

As to Claim 28, Collette et al teach a transition metal oxygen scavenging material present in the preblend in an amount of about 50 to about 1000 parts per million (col. 10, lines 23-37), the polyamide material is present in the preblend in an amount of about 10-50% by weight of the preblend (col 15 line 7-11), and the polyester comprising PET used in a percentage of about 50-90% (col 15, lines 3-4).

As to Claim 29, Collette et al teach a transition metal oxygen scavenging material present in the preblend in an amount of about 50 to about 1000 parts per million (col. 10, lines 23-37), the polyamide material is present in the preblend in an amount of about 10-50% by weight of the preblend (col 15 line 7-11), and the polyester comprising PET used in a percentage of about 50-90% (col 15, lines 3-4).

As to Claim 30, the base polyester contains virgin polyethylene terephthalate (col 16, lines 12-14).

4. **Claims 31-33** are rejected under 35 U.S.C. 103(a) as obvious over Nilsson (USPN 5034252) in view of Collette (5759653). **As to Claim 31**, Nilsson teaches mixing polyethylene terephthalate, polyamide, and an oxygen scavenging material (col 3, lines 29-50), making a monolayer preform by injection molding and expanding it to provide a plastic container (5:1-41).

The article of Nilsson would have stability during storage (an aging process is required to cause activation), and would have an oxygen scavenging property activated when filled with aqueous fluid. Nilsson is silent to the preblend process of step (a) and mixing the preblend with the base polyester.

However, Collette teach a method comprising the steps of: (a) forming a preblend/masterbatch (col 5 lines 6-7) comprising: a diluent polyester (col 5 line 17), a polyamide material (col 5 line 18), and an oxygen scavenging material (col 5 line 19); providing a base grade polyester (col 15, lines 12-20, col 16, lines 12-14); introducing the preblend and the polyester into a molding apparatus to permit melting and admixing of the preblend and the base polyester (col 5 lines 29-65); injection molding or extruding the admixture in the apparatus to provide a preform (fig 3, **59**); and expanding the preform to provide a plastic container having a barrier layer formed from the admixture of the preblend and polyester (fig 6 & 7), wherein the plastic container and barrier layer has oxygen scavenging property that is activated after filling the container with an aqueous fluid (7:24-33, 7:59-63, 8:46-51). Collette also teaches forming bottles with catalysts that are activated by heat (7:32) and hot fill applications (7:61), which would therefore activate the catalyst during filling. It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Collette into that of Nilsson in order to provide improved mixing of the constituent materials.

As to Claim 32, Collette et al teach a transition metal oxygen scavenging material present in the preblend in an amount of about 50 to about 1000 parts per million (col. 10, lines 23-37), the polyamide material is present in the preblend in an amount of about 10-50% by weight of the preblend (col 15 line 7-11), and the polyester comprising PET used in a percentage

of about 50-90% (col 15, lines 3-4). **As to Claim 33**, Collette et al teach a transition metal oxygen scavenging material present in the preblend in an amount of about 50 to about 1000 parts per million (col. 10, lines 23-37), which reads on the claimed amount or suggests the result-effective nature of this component.

Response to Arguments

5. Applicant's arguments filed 13 May 2008 have been fully considered but they are not persuasive. The arguments appear to be on the following grounds:

a) Applicants submit that the previous office action has wrongly characterized the reference, and that none of the cited passages disclose activation of the collette scavenger layer after filling.

The EVOH shielding layers described in the cited passages of Collette (8:46-9:10) are used to prevent oxygen from reaching the already-activated oxygen-scavenging layer during. Upon filling, the oxygen barrier properties of the inner EVOH shielding layer decrease, allowing oxygen entrapped in the filled container to permeate through the inner EVOH layer. The inherency argument regarding the activation is in error.

b) Claim 1 is not an obvious reordering of the steps of Collette because Collette teaches a container made from a material that is activated prior to filling. The burden is not on Applicant to show non-obviousness.

c) It is immaterial whether Collette teaches an admixture as recited in Claim 27 since Collette teaches activation of the barrier layer before filling. Contrary to the office action, Collette does not disclose admixture that consists essentially of a preblend and a virgin bottle grade polyester.

d) Collette teaches against making a monolayer container as recited in Claim 31.

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e) Neither Collette nor Nilsson teach a method in which the oxygen-scavenging property is activated after filling. Even in the proposed combination, the material would be activated before filling.

6. These arguments are not persuasive for the following reasons:

a,b) Applicants' remarks appear to be drawn the activation after filling, but fail to distinguish the disclosed and claimed process from that of Collette. The table below is provided to help clarify why the claimed method is not believed to be patentably distinguishable from the Collette process.

Disclosed Method (citations from instant specification)	Collette
(a) Preblend comprising (i) diluent polyester which may be <u>virgin or post-consumer</u> PET (page 16, lines 10-12), (ii) polyamide (page 17, line 15 to page 18, line 31), and (iii) oxygen scavenging material (pages 19-20)	(a) Preblend comprising (i) diluent virgin polyester (5:21), (ii) polyamide (5:21), and (iii) oxygen scavenging material (catalyst, 5:21)
(b) base polyester, <u>which may be post-consumer PET</u> (bases may be same as diluents, page 8, lines 22-24, diluents are listed at page 16, lines 10-12)	(b) base polyester, <u>which is post-consumer PET</u> (5:59)
(c) admixing preblend and base polyester	(c) admixing preblend and base polyester (5:66-6:3)
(d) injection molding the admixture of (c) to provide a preform	(d) injection molding the admixture of (c) to provide a preform (column 6)
(e) expanding the preform	(e) expanding the preform (8:30, for example)
(f) premature activation of the oxygen scavenging complex eliminated by use of the preblend process which minimizes or eliminates contact between the polyamide material and the oxygen scavenging material prior to incorporation of the base polyester (page 32, lines 17-24). Activation is performed by filling with water (page 9, lines 16-20).	(f) Collette provides the same or substantially the same preblend process, which would implicitly minimize contact between the polyamide and the oxygen scavenging material in the same manner. The container is filled with a product containing water (8:62-67).

It is submitted that the concept of “activation” requires additional technical analysis. Both the instant specification (page 9, lines 16-20) and Collette (6:60, 7:17-20) teach or suggest that water is related to the concept known as “activation” of the catalyst. Applicants' arguments discuss in detail how the claimed process is used to activate the oxygen scavenging property by filling the container with aqueous fluid. Applicants appear to assert that PC-PET material has some role in accelerating the activation of an oxygen scavenger (13 May 2008 Remarks, page 12, lines 12-17), but Applicants (as noted above) also use a diluent and base polyester which may each be PC-PET (Specification, page 16, lines 10-12, page 17, line 15 to page 18, line 31), the same material disclosed by Collette. In view of this similar usage of PC-PET, it remains unclear why or how the claimed process can provide an article which is “activated” only after filling with a water-containing product. If Applicants argue that Collette’s process is inherently “activated” by its use of PC-PET, then this would contradict the instant claims which may also be fabricated using PC-PET, and the instant specification, which appears to disclose that the preblend process is the mechanism which preserves the oxygen-scavenging property (Specification, page 32).

Once a reference teaching a product appearing to be substantially identical is made the basis of a rejection, and the Examiner presents evidence or reasoning tending to show inherency, the burden shifts to the Applicant to show an unobvious difference. See MPEP 2111.04(IV). “[T]he PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his [or her] claimed product. Whether the rejection is based on inherency’ under 35 U.S.C. 102, on prima facie obviousness’ under 35 U.S.C. 103, jointly or alternatively, the burden of proof is the same...[footnote omitted].” The burden of proof is similar to that required with respect to product-by-process claims. *In re Fitzgerald*, 619 F.2d

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67, 70, 205 USPQ 594, 596 (CCPA 1980) (quoting *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433-34 (CCPA 1977)). In this case, Applicants' remarks do not address the technical basis of the rejection, but merely focus on an asserted difference in the result. However, as demonstrated above, the similar use of the preblend process and substantially the same constituents suggests that additional evidence may be required to show how Applicants' process is distinguishable from that of Collette.

Additionally with respect to the instant specification, Applicants disclose that the preblend method permits a homogeneous distribution of the oxygen scavenging material throughout the polyester, which reduces degradation of the oxygen barrier effect because of a premature contact and activation of the polyamide-oxygen scavenging metal complex (page 32). It is important to the instant invention that the preblend minimizes or eliminates contact between the polyamide material and the oxygen scavenging material prior to incorporation into the base polyester because this, in turn, eliminates premature activation of the oxygen scavenging complex (*Id.*). Thus, Applicants' specification appears to disclose that the preblending process is the mechanism for preserving activation until after the filling of the container. In this view, it is unclear what basis is asserted for the position that the instant process is more than a rearrangement of the order of filling and activation since Collette's preblend process would also appear to eliminate contact between the polyamide and the oxygen scavenging material in the same way, and would appear to preserve the oxygen scavenging material until filling or deliberate activation.

c) As shown above, the process of Collette is asserted to be not substantially different from the claimed process. The instant specification admits that PC-PET and virgin bottle grade PET are

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interchangeable, and therefore it is submitted that there is no unexpected result associated with the use of one material over the other. Additionally, there is no disclosure or evidence that the materials (PET vs. PC-PET) are structurally or compositionally distinguishable.

d,e) Nilsson teaches a single layer article, and the use of a preblend process in the Nilsson process would lead to the desired order of activation. Also see the new reference to Speer above.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The masterbatching or preblending process is conventional in the art. See Nishikawa (US 5,965,653), Example 4.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MATTHEW J. DANIELS whose telephone number is (571)272-2450. The examiner can normally be reached on Monday - Friday, 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Matthew J. Daniels/

Primary Examiner, Art Unit 1791

7/17/08